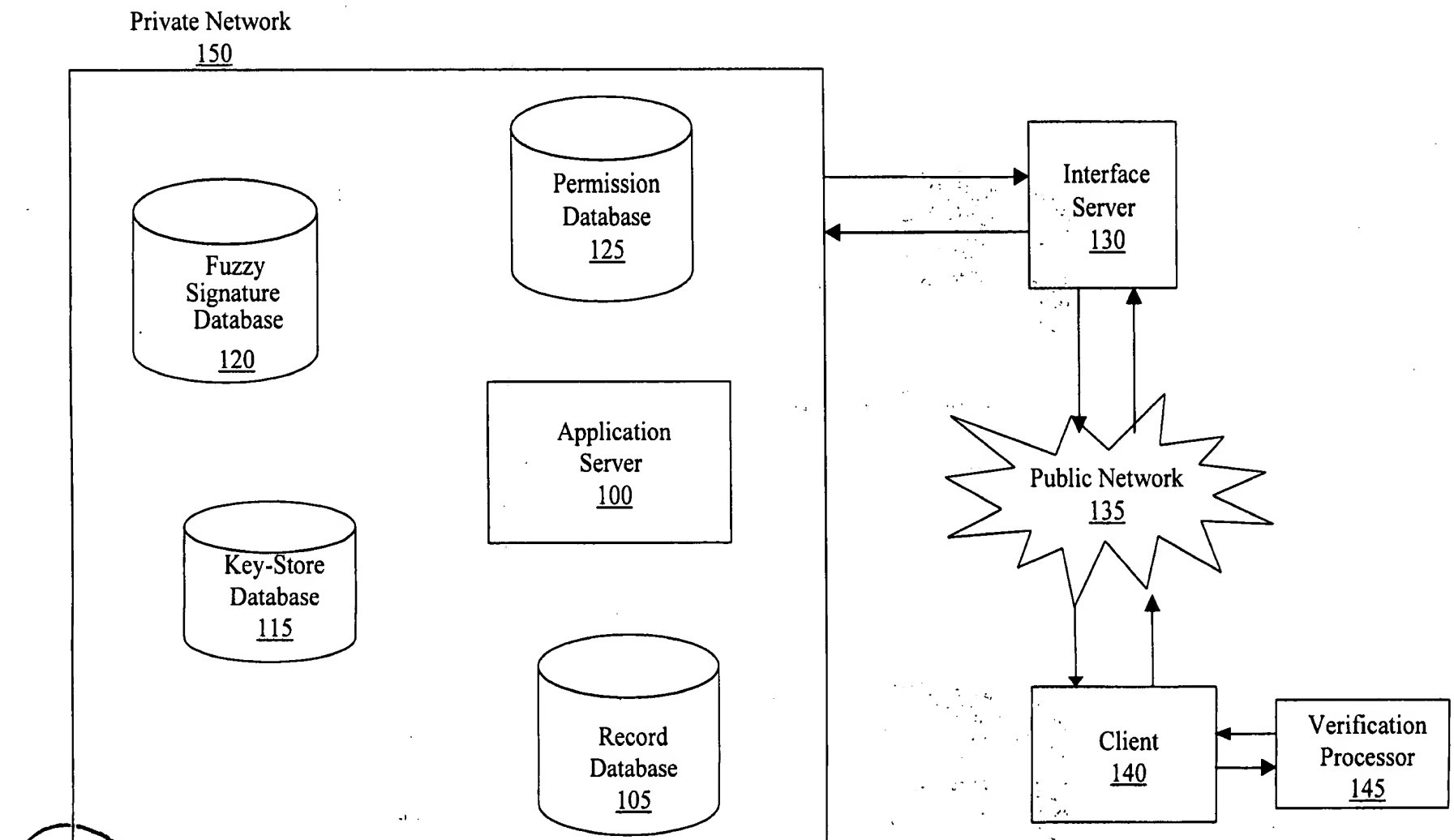
6676807 20080260

Fig. 1a



10

Fig. 1b

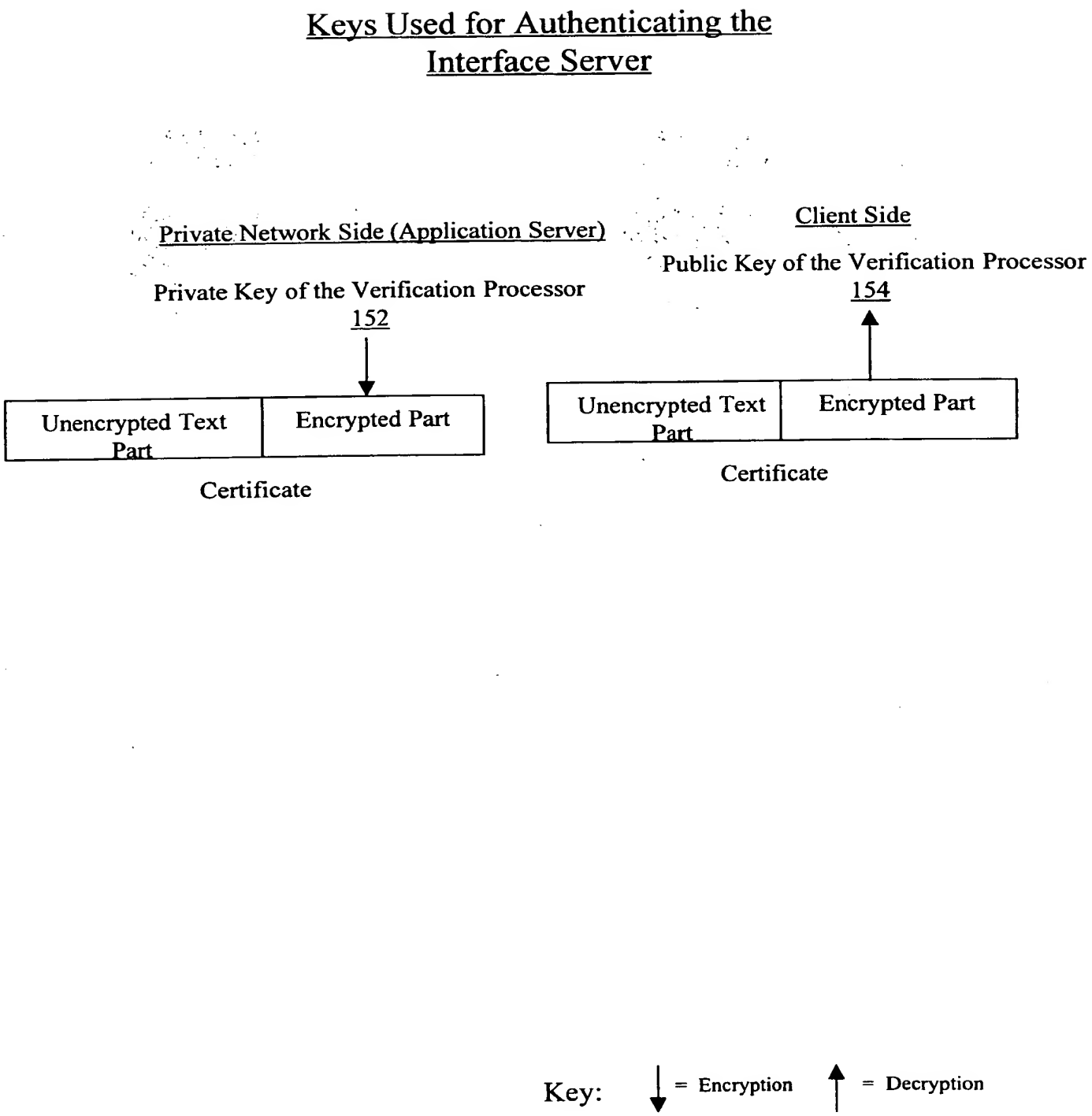

Keys Used for Authenticating the Interface Server
Private Network Side (Application Server)
Private Key of the Verification Processor 152
Unencrypted Text Part
Encrypted Part
Certificate
Client Side
Public Key of the Verification Processor 154
Unencrypted Text Part
Encrypted Part
Certificate
Key:
= Encryption
= Decryption

Fig. 1c

Keys Used in Transmitting, Receiving, and Storing Data

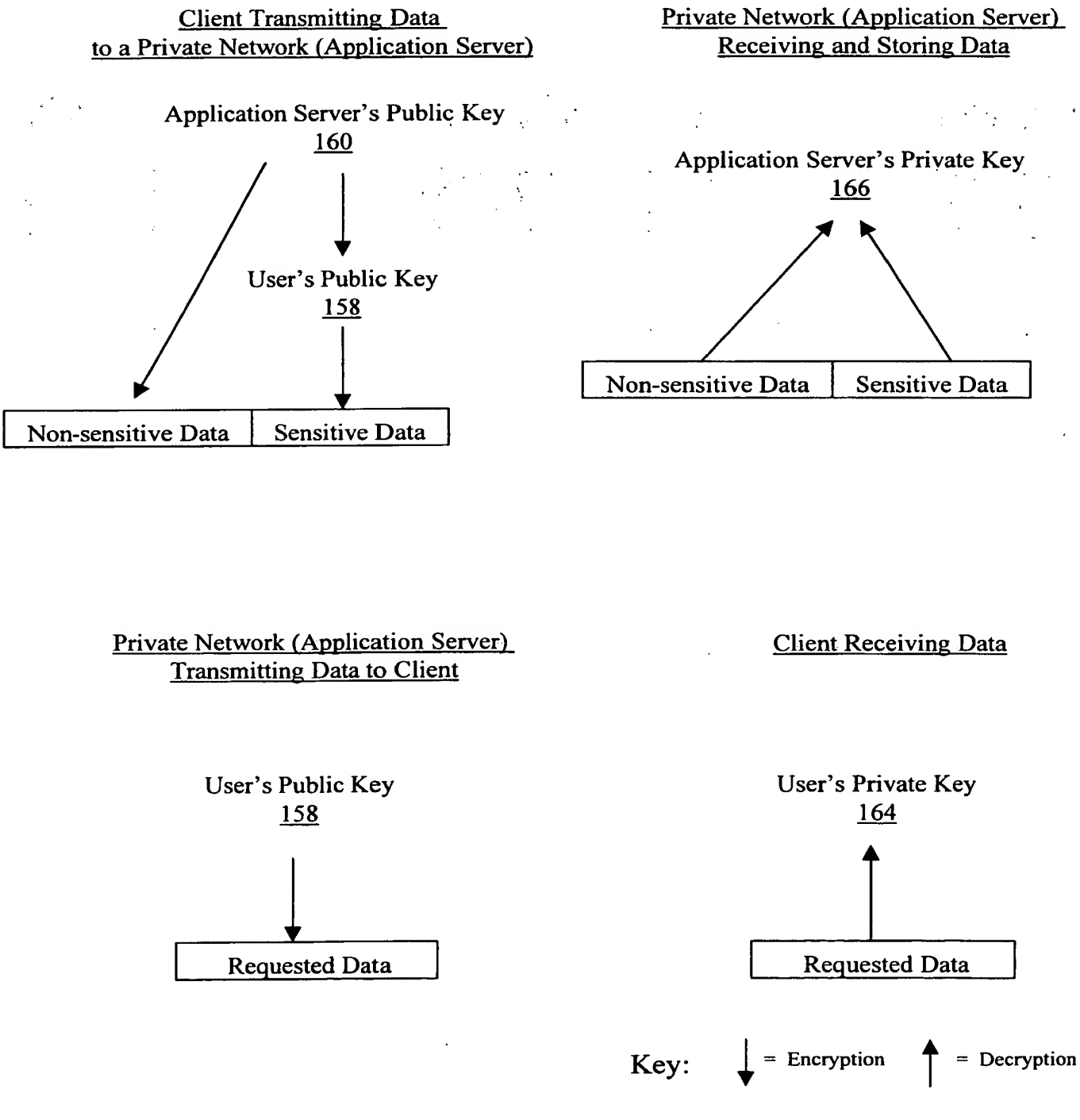
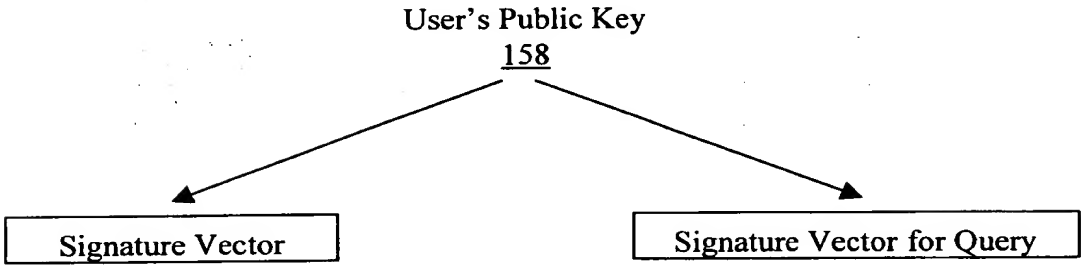


Fig. 1d

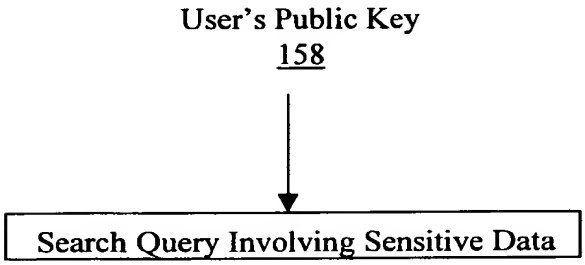
Keys Utilized in Fuzzy Searching



Key: ↓ = Encryption ↑ = Decryption

Fig. 1e

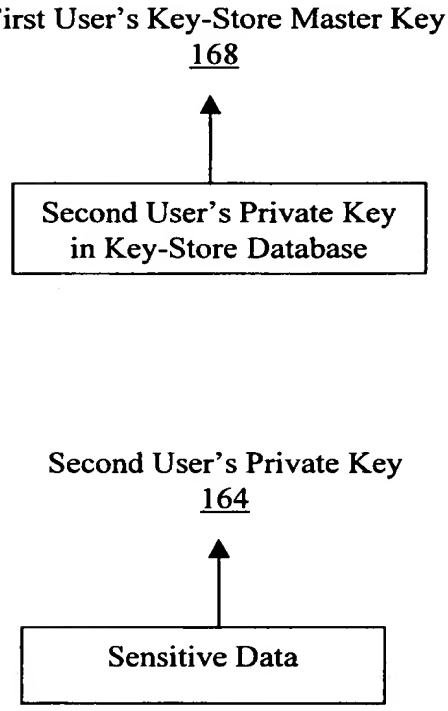
Keys Utilized in Relational Database Searching



Key: ↓ = Encryption ↑ = Decryption

Fig. 1f

Keys Utilized in Accessing Sensitive Data



Key: ↓ = Encryption ↑ = Decryption

Fig. 1h

Steps for Communications between a Client and a Private Network

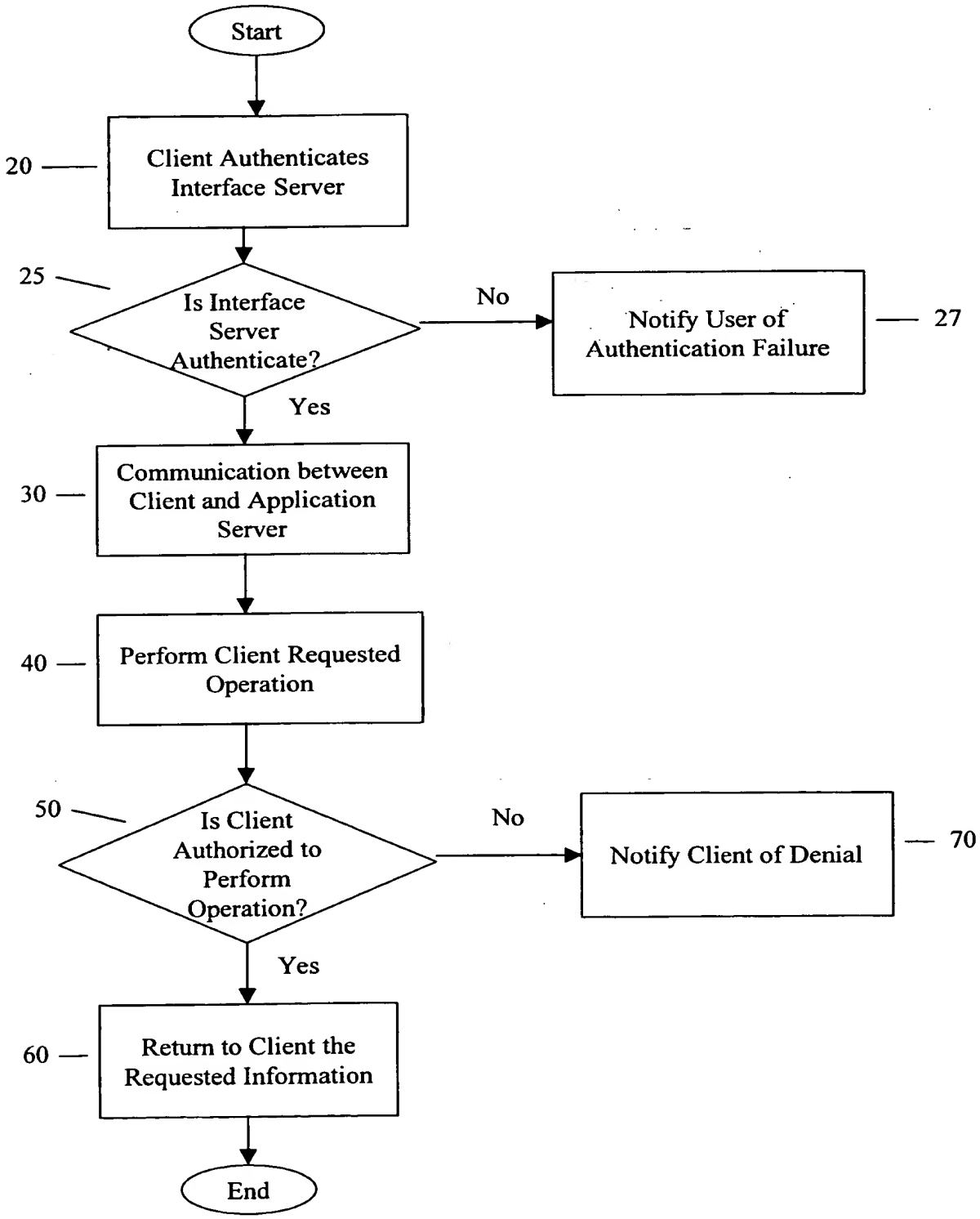


Fig. 2

Authentication

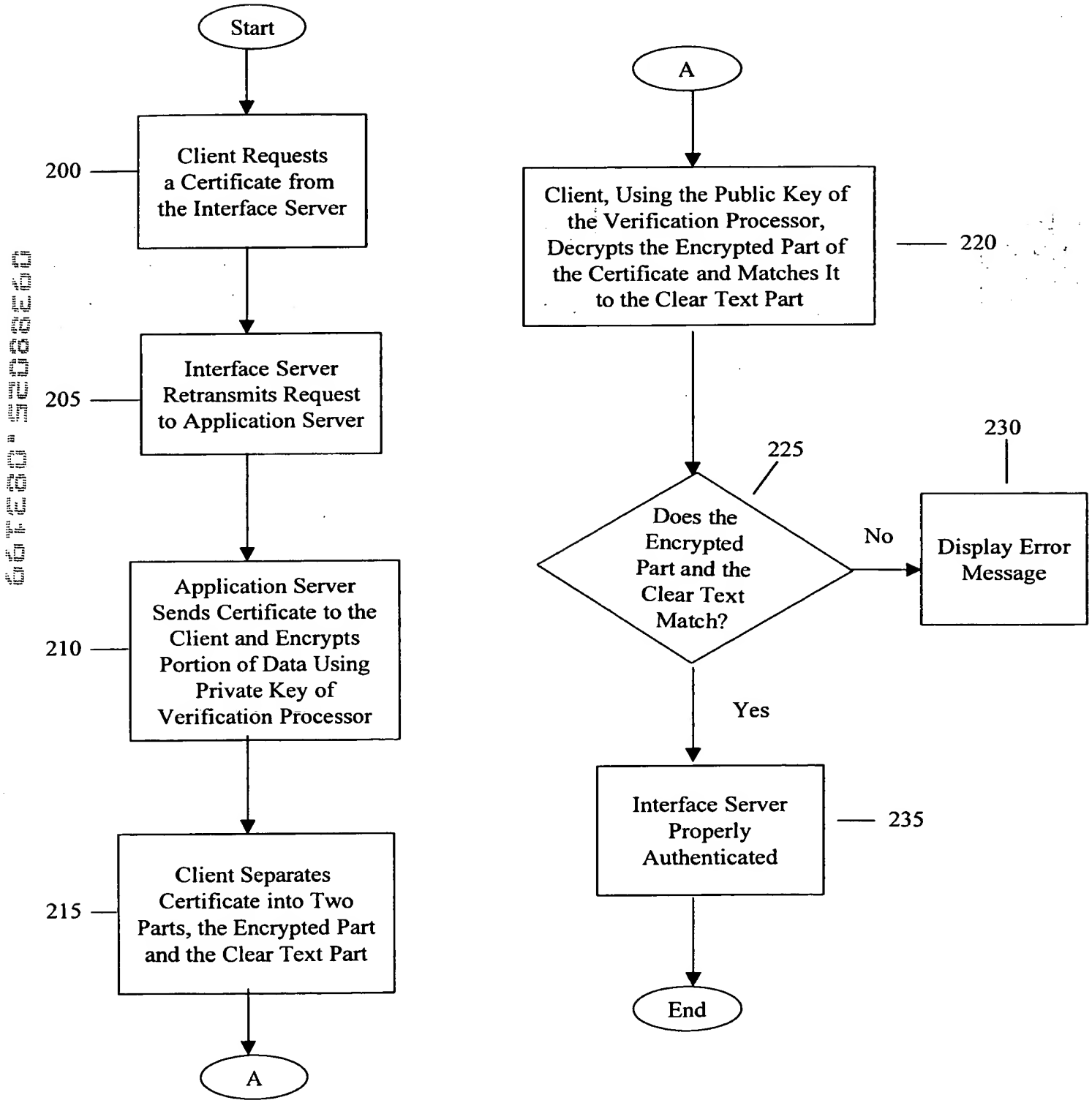


Fig. 3

Transmission and Storage of Data

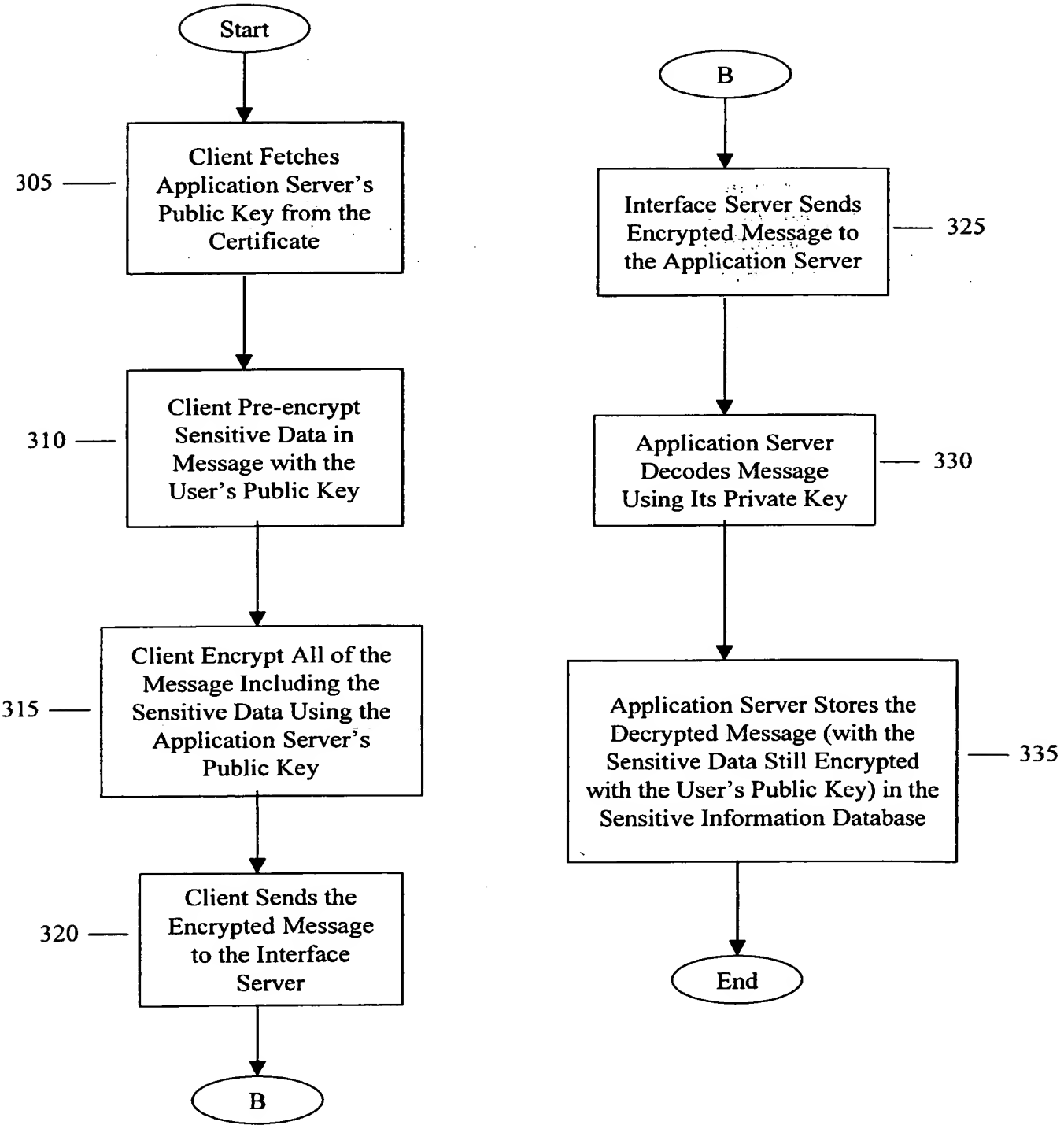


Fig. 4

Search Operation

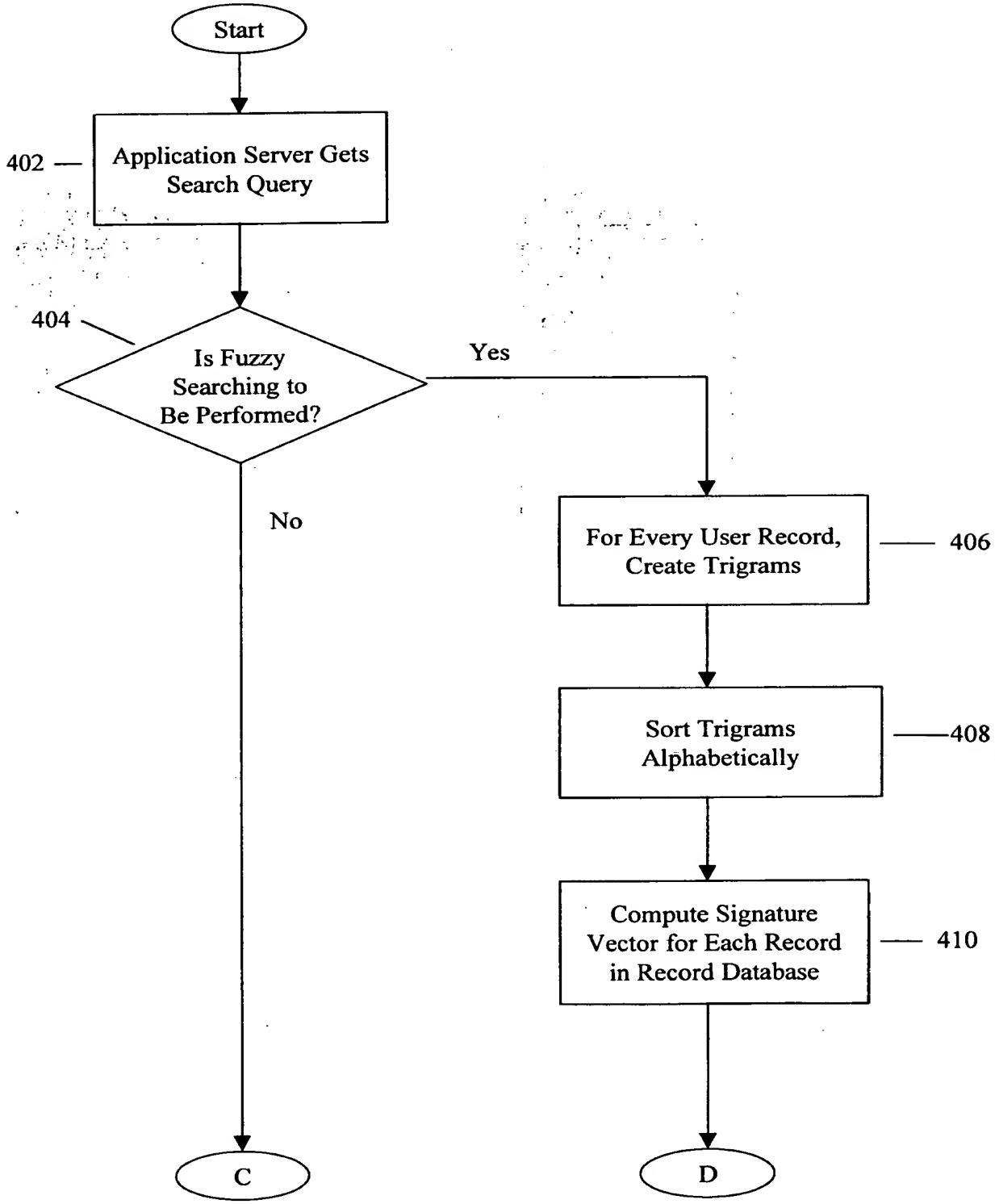


Fig. 4

Search Operation

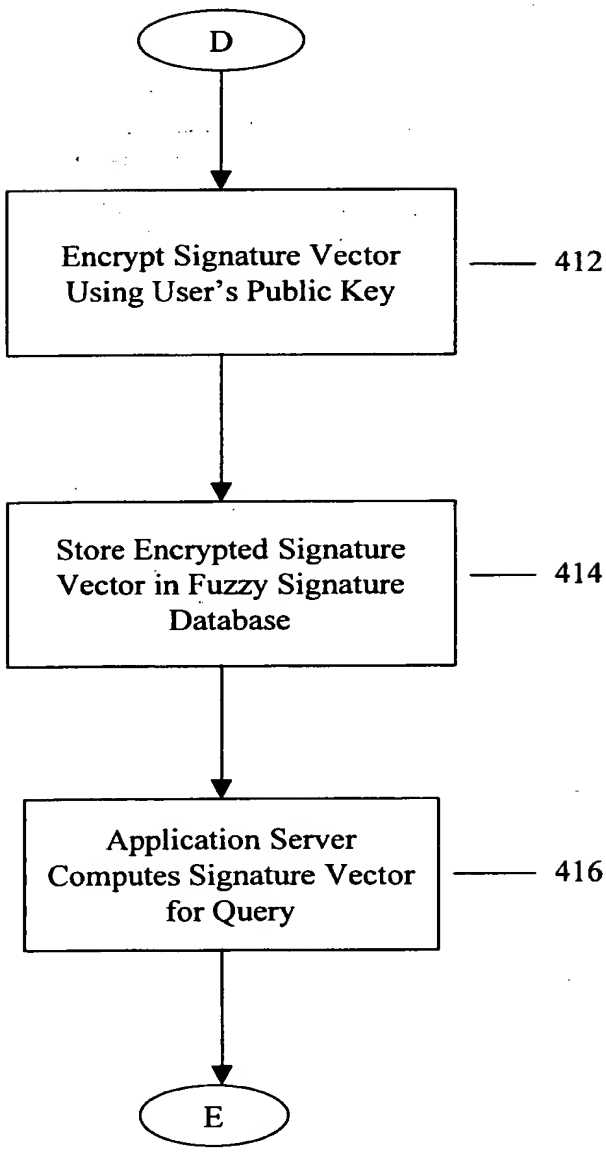


Fig. 4

Search Operation

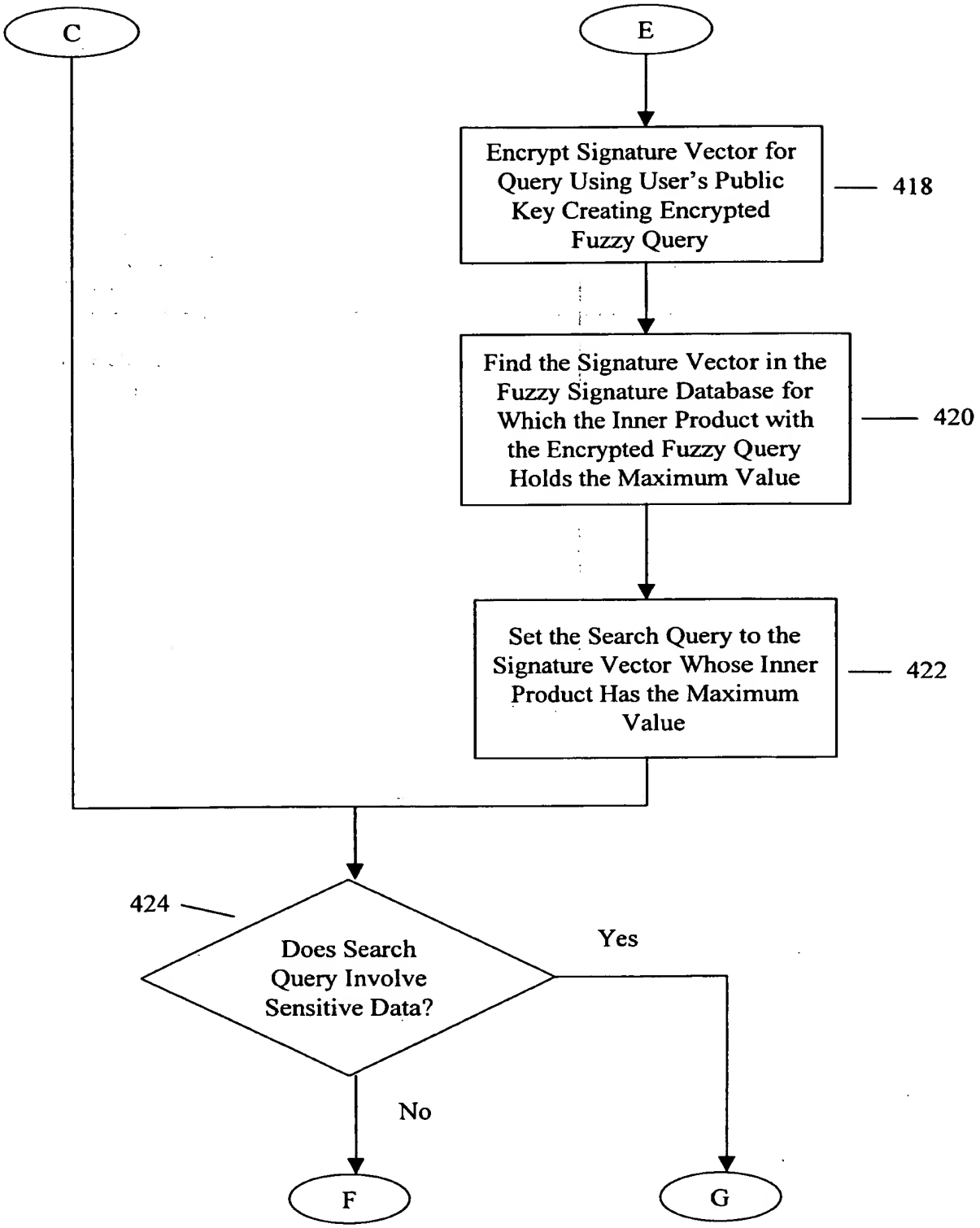


Fig. 4

Search Operation

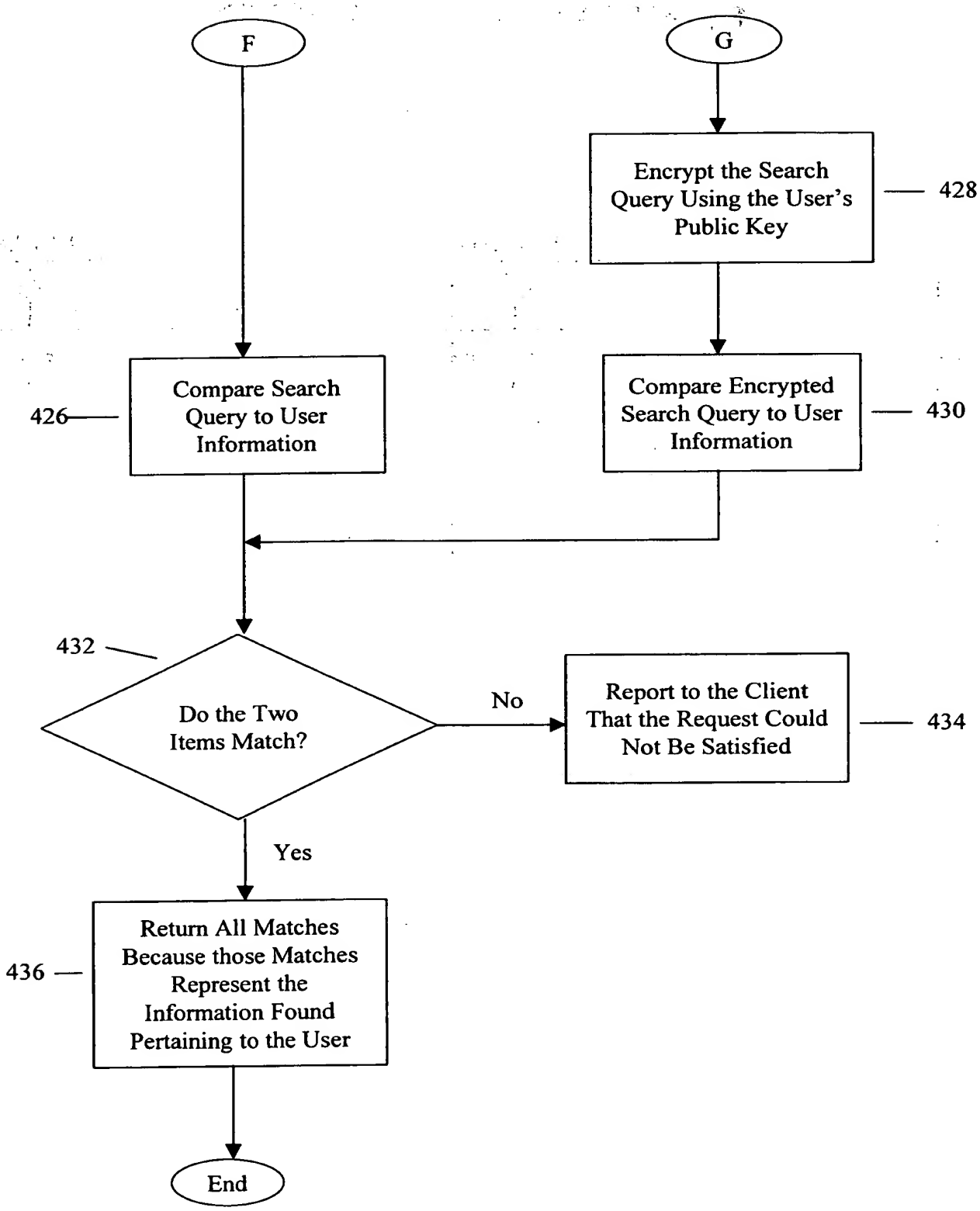


Fig. 5

Accessing Sensitive Data

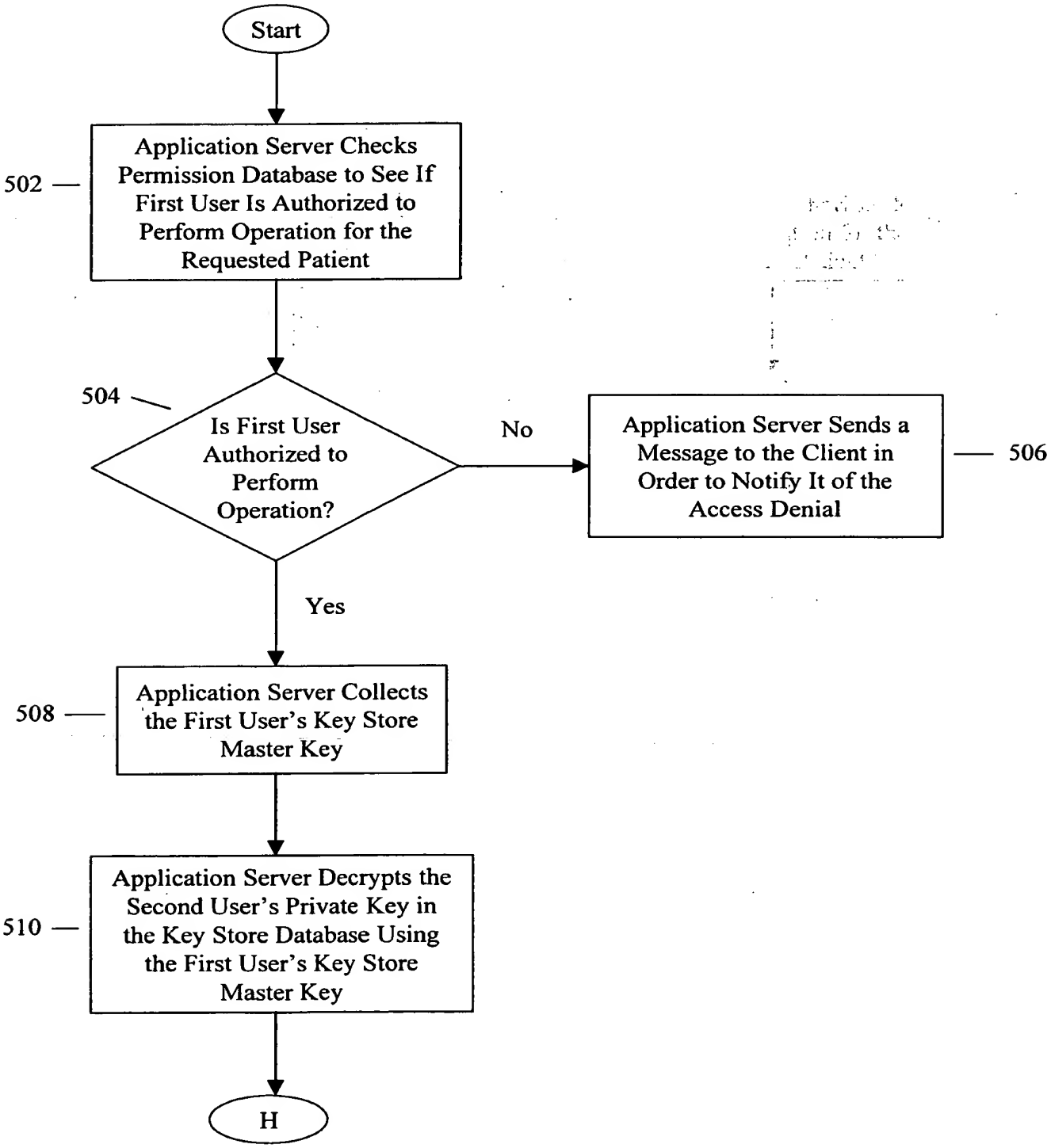
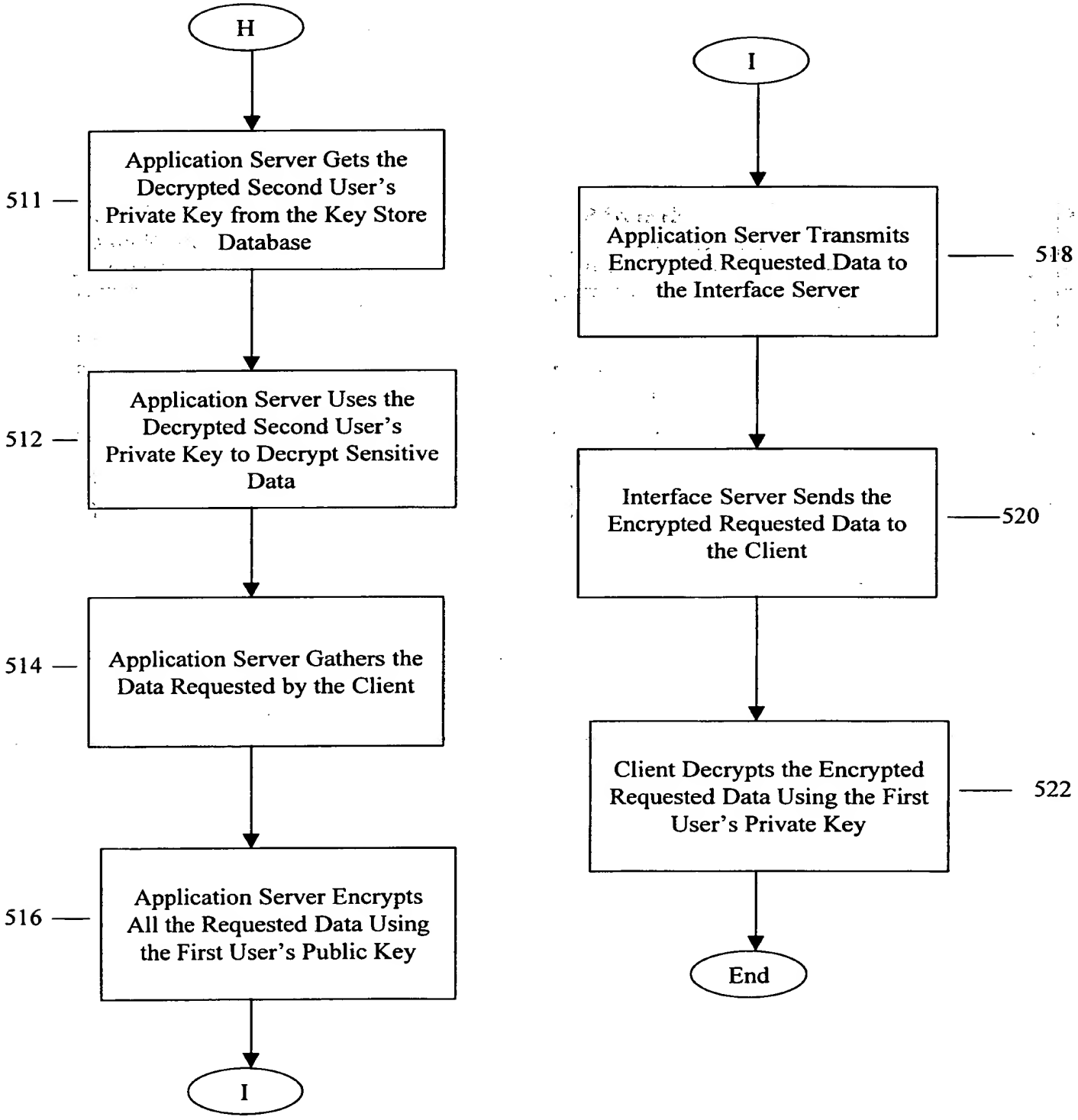


Fig. 5

Accessing Sensitive Data (Cont.)